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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,595	03/15/2004	Andrew Sugg	UEC 7509.1	1791

321 7590 01/09/2007

SENNIGER POWERS
ONE METROPOLITAN SQUARE
16TH FLOOR
ST LOUIS, MO 63102

EXAMINER	
GOINS, DAVETTA WOODS	
ART UNIT	**PAPER NUMBER**
2612	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	01/09/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 01/09/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspatents@senniger.com

Office Action Summary	Application No.	Applicant(s)	
	10/800,595	SUGG, ANDREW	
	Examiner	Art Unit	
	Davetta W. Goins	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-58 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-58 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 10/04.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-28 and 30-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mollenkopf et al. (US Pat. 6,965,302 B2) in view of Nilssen (US Pat. 5,999,094).

In reference to claims 1, 10-13, 19, 23, 30, 39-42, 48, 52, Mollenkopf discloses the claimed conductive member, a data signal generator connected to the conductive member for supplying a data signal to the conductive member; wherein the conductive member is adapted to capacitively couple the data signal onto the conductor, which is met by three MV phase conductors is connected to one or more distribution transformers 60. Each distribution transformer 60 may include an associated BD 100, although if no users receiving power from the distribution transformer subscribe to the PLCS service, the distribution transformer may not have an associated BD. Each BD 100 is coupled to the MV power line and the LV power line connected to the transformer 60, thereby providing a path for data around the transformer 60 (col. 6, lines 47-65). Although Mollenkopf does not specifically disclose the claimed conductive member having a length of at least six inches but less than 200 feet, he does disclose a coupling device 100 also includes conductors for communicating data signals to and from the

power line. Nilssen discloses a system in which data communication is transmitted over a powerline. The system includes a conducting member connected to the powerline for transmitting it's digitized signals. The communication system and function will only operate properly as long as the length of the main signal "conducting means is very short relative to the length" of the wave-train associated with the hundred-micro-second-long bursts of digitized information. Therefore, the total length of the signal conducting means should not exceed about 1000 feet (col. 16, lines 7-31). Since both Mollenkopf and Nilssen disclose systems that are capable of transmitting data over the powerlines via coupling devices using conductors, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of using a conductive member having a specific length, such as 200 feet, or any other specified length to ensure communication since the length of the signal conducting means represents a factor that may affect the quality of this signal communication function.

In reference to claims 2, 25, 31, Mollenkopf discloses the claimed conductive member comprises a cable adapted to be positioned adjacent the conductor, which is met by user device connected to the LID 50 may be any device cable of supplying data for transmission (col. 6, lines 20-37).

In reference to claims 3-7, 14, 24, 27, 32-36, 43, 53-55, Mollenkopf discloses the claimed conductive member is formed from a piece of common insulated cable, a medium wrapped about the conductor, using coaxial cable, the end of the inner conductor adapted to be a neutral

wire or ground wire, which is met by a BD cable including a twisted pair of conductors including a BD LV conductor and BD neutral conductor. The BD LV conductor of the first BD cable is connected to one of the hot LV conductors extending from the transformer and the BD neutral conductor of the first BD cable is connected to the neutral conductor extending from the transformer (col. 8, lines 50-65; col. 25, lines 54-63).

In reference to claims 8, 37, 56, Mollenkopf discloses the claimed a grounding wire of a surge arrester and wherein the conductive member comprises a conductive medium adapted to be wrapped around the grounding wire, which is met by a third BD cable is a ground conductor connected to an earth ground, which typically is an earth ground conductor that connects the transformer housing to a ground rod (col. 8, lines 50-65).

In reference to claims 9, 38, Mollenkopf discloses the claimed phase conductor of the electrical power delivery system; and wherein the conductive member is adapted to capacitively couple the data signal onto the phase conductor, which is met by three MV phase conductors. Each of the three MV phase conductors is connected to one or more distribution transformers 60 (col. 6, lines 47-65).

In reference to claims 15-17, 20-22, 26, 28, 44-46, 49-51, 57, although Mollenkopf does not specifically disclose the claimed conductive member is adapted to be positioned along the conductor such that a capacitive coupling measured between the conductive member and the conductor is greater than 5 pF/cm, 10 pF/cm, 15 pF/cm, he does disclose a first BD cable

includes a twisted pair of conductors including a BD LV conductor and BD neutral conductor. The BD LV conductor of the first BD cable is connected to one of the hot LV conductors extending from the transformer and the BD neutral conductor of the first BD cable is connected to the neutral conductor extending from the transformer (col. 8, lines 51-65). Since Mollenkopf discloses a pair of conductive wires that are twisted to form the coupling unit for transmitting data along a powerline, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a conductive member that is greater than 5 pF/cm, 10pF/cm, 15 pF/cm, or any other length in order to maintain and impedance of the twisted pair of conductors equal to an impedance of the twisted pair of conductors.

In reference to claims 18, 47, Mollenkopf discloses the claimed resistor connected in series with the conductive member and the data signal generator, which is met by the method of matching the impedance of the LV power line is to separately terminate the BD LV conductors of the first and second BD cables through a termination resistor to ground. The value of the termination resistor may be selected to match the characteristic impedance of the LV power line (col. 9, lines 31-39).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 29 and 58 are rejected under 35 U.S.C. 102(e) as being anticipated by Mollenkopf et al.

In reference to claims 29, 58, Mollenkopf discloses the claimed elongated conductor of an electrical power delivery system, the device comprising: an elongated conductive member adapted to be positioned in parallel with the elongated conductor; and a data signal generator connected to the elongated conductive member for supplying a data signal to the elongated conductive member; wherein the elongated conductive member is adapted to capacitively couple the data signal onto the elongated conductor, which is met by three MV phase conductors is connected to one or more distribution transformers 60. Each distribution transformer 60 may include an associated BD 100, although if no users receiving power from the distribution transformer subscribe to the PLCS service, the distribution transformer may not have an associated BD. Each BD 100 is coupled to the MV power line and the LV power line connected to the transformer 60, thereby providing a path for data around the transformer 60 (col. 6, lines 47-65).

5. The prior art of record and not relied upon is considered pertinent to the applicant's disclosure as follows. Baker et al. (US Pat. 5,834,697), Cern (US Pat. 6,452,482 B1), and Bueti et al. (US Pat. 7,129,821 B2), which disclose powerline communication systems.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davetta W. Goins whose telephone number is 571-272-2957. The examiner can normally be reached on Mon-Fri with every other Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu can be reached on 571-272-2964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Davetta W. Goins
Primary Examiner
Art Unit 2612

D.W.G.
January 3, 2007